

**Comments from NCFI Polyurethanes on Joint Appendix JA 7—2008  
(Follow up on Title 24 hearing on Dec. 17, 2007)**

To: Mr. Chris Gekas

Re: Joint Appendix JA7–2008  
Comments

Dear Mr. Gekas:

As a follow up to the hearing on December 17, 2007, we offer the following comments on Joint Appendix JA7 – Installation Procedures for Medium-Density, Closed-Cell and Low Density, Open-Cell Spray Polyurethane Foam (SPF):

1. JA7.2 Terminology:
  - A. The term “Vapor barrier” is not defined. We recommend removing its reference from JA7.
  - B. Spray Polyurethane Foam (SPF): The word “isocyanurate” should be spelled “isocyanate.”
2. JA7.3 General Requirements
  - A. Correct typo in bullet item that begins “Low-Density SPF insulation is open cell...”: The word “density” has a zero in it.
3. JA7.9 R-Value and U-Value Specifications
  - A. “For Medium Density foam all the total R-value shall be calculated based on ... an R-value of 5.8 per inch.”

The R-value of closed-cell spray polyurethane foams is highly dependent on the blowing agent gas contained within the foam cells. The blowing agent gas varies with the spray foam formulation. Therefore, the R-value of closed-cell spray foam will vary from manufacturer to manufacturer and from system formulation to system formulation.

The R-value of 5.8 is not representative of closed-cell spray foams in general and does not allow for the differences between spray foams specifically.

Classifying all closed-cell spray foams with an R-value of 5.8 unfairly and erroneously misrepresents the performance of the product in the field and unfairly and erroneously positions the spray polyurethane foam insulation industry at a competitive disadvantage.

In December 2007, NCFI submitted documentation to the California Bureau of Home Furnishings and Thermal Insulation. In that submittal, we provided aged R-values of various closed-cell, medium density spray polyurethane foams as indicated in the following table:

SPF System Number	R-value per inch (°F•hr•ft <sup>2</sup> /Btu)
10-001	6.9
10-011	6.9
11-012	6.4
11-016	6.4
11-011	6.4
11-015	6.4

As there is variation in R-value between manufacturers and between systems, we recommend that the final R-value of the assembly be based on the manufacturer's labeled R-value as required in Sections JA7.3 and JA7.10.

If you have any questions on the above, we will be glad to discuss them with you.

Regards,

NCFI Polyurethanes  
Roger V. Morrison, PE, RRC  
Senior Staff Engineer  
800-346-8229 x 2231